Claims

The invention claimed is:

1. A test automation tool operable to integrate a set of dynamic attributes and values into tests to be performed on a computing environment, comprising:

a job submission engine (JSE) operable to receive input regarding first attributes unchanged from a first computing environment and second attributes representing change from the first computing environment;

a job control file generator (JCFG) in electronic communication with said job submission engine operable to automatically generate job control files (JCFs) for controlling testing of said computing environment according to values of said first attributes generated based on an automatic sampling of values, and values of said second attributes,

wherein said JSE is further operable to automatically submit the JCFs to the computing environment for execution and to automatically monitor execution according to said JCFs.

2. A test automation tool as claimed in claim 1 wherein the automatic sampling of values is a random sampling.

3. A test automation tool as claimed in claim 2 wherein the automatic sampling of values is further based upon a user-specified probability that a value should fall within a particular range of values.

4. A test automation tool as claimed in claim 2 wherein the automatic sampling of values is further based upon a user-specified probability that a particular value should occur.

5. A test automation tool as claimed in claim 1 wherein the JSE further comprises a user interface, wherein said JSE is operable to receive the input regarding at least some of said second attributes through said user interface.

6. A test automation tool as claimed in claim 5 wherein the JCFG is operable to generate the JCFs based on values of said second attributes provided through said user interface.

7. A test automation tool as claimed in claim 1 further comprising one or more agents operable to automatically analyze results of performing tests of said computing environment according to the JCFs.

8. The test automation tool of claim 6 wherein the JCFG is operable to generate the JCFs including parameters for controlling submission of said JCFs through a job queuing system of the computing environment.

9. The test automation tool according to claim 8 wherein said JCFG is operable to generate the JCFs by reference to a template file storing values of generic attributes obtained from input received by said JSE by employing one or more value-setting methods.

10. The test automation tool according to claim 9 wherein said JCFG is operable to generate the JCFs by reference to a script file storing special job request attributes.

11. The test automation tool according to claim 10 wherein the JCFs include one or more job control commands.

12. The test automation tool according to claim 1 further comprising an agent operable to review results of performance of said JCFs.

13. The test automation tool according to claim 10 wherein said agent is comprised of a plurality of special task agents.

14. The test automation tool of claim 13 wherein said special task agents include a job results analysis agent and an error analysis agent.

15. The test automation tool of claim 14 wherein said error analysis agent includes a sub-task agent operable to analyze job cancellations and another sub-task agent operable to analyze on-hold jobs.

16. A method of generating computer readable instructions for controlling operations to test a computing environment, comprising:

obtaining attributes of a computing environment to be tested, said attributes including first attributes unchanged from a first computing environment, and second attributes representing change from the first computing environment;

generating values of said first attributes to be tested based on an automatic sampling of said values; and

generating values of said second attributes; and

automatically generating computer readable instructions for performing testing of said computing environment based on said generated values of said first and second attributes.

17. The method of claim 16 wherein said automatic sampling of said values is a random sampling of values.

18. The method of claim 16, wherein said second attributes include a dynamic set of values changeable from test run to test run.

19. The method of claim 18, wherein second attributes further include a user-provided special requirement attribute.

20. A machine readable medium having a set of instructions recorded thereon for performing a method of generating computer readable instructions for controlling operations to test a computing system, said method including:

obtaining attributes of a computing environment to be tested, said attributes including first attributes unchanged from a first computing environment, and second attributes representing change from the first computing environment;

generating values of said first attributes to be tested based on an automatic

sampling of said values; and

generating values of said second attributes to be tested thoroughly; and

automatically generating computer readable instructions for execution of tests for

said computing environment based on said generated values of said first and second

attributes to be tested.